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ABSTRACT

Many public libraries in the United States have undertaken the planning process suggested by the Public Library Association. They have incorporated into their mission statements some of the Association's eight basic library service roles as local priorities. This study explored the relationship between the chosen service role of 12 public library facilities in Lorain County (Ohio) and the quality of the informational graphics used by the libraries. Criteria for assessment were established, based on published standards for informational graphics in public buildings. A checklist developed from these criteria was used to measure the quality of signs and displays in each library, noting the quality of particular types of graphics and the quality of graphics in six service areas at each site. Types of graphics studied were those used for orientation, direction, identification, and instruction in a public library setting. Design elements observed include legibility, visibility, readability, consistency, and aesthetics. Observational data were then compared with the mission statements of these libraries to determine if any relationship existed between graphics quality and the stated priorities for service. Results indicate that for these libraries, choices of particular service roles have no discernible effect on the quality of the information graphics. Three tables present study findings; and four appendixes contain additional information about service roles, criteria, and the checklist. (Contains 28 references.) (SLD)

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INFORMATIONAL GRAPHICS IN THE PUBLIC LIBRARY

A Master's Research Paper submitted to the
Kent State University School of Library and Information Science
in partial fulfillment of the requirements
for the degree Master of Library Science

by

Judith Brunner Leuthaeuser

November 1992

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Master's Research Paper by

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ABSTRACT

Many public libraries in the United States have in recent years undertaken the planning process suggested for their use by the Public Library Association. They have incorporated into their individual mission statements some of the Public Library Association's set of eight basic library service roles as local priorities. This study explored the relationship between the chosen service roles of twelve public library facilities in Lorain County, Ohio, and the quality of the informational graphics used by those libraries. Criteria for assessment were established, based on published standards for informational graphics in public buildings. A checklist was developed from these criteria to measure the quality of signs and displays used in each library. Data gathered from observation at each site were then compared with the mission statements of the libraries in the study group to determine if any relationship exists between the quality of informational graphics in a library building and that library's stated priorities for service. Results indicate that for the libraries in the study choices of particular service roles have had no discernable effect on the quality of informational graphics in their facilities. The quality of particular types of informational graphics was also noted, as well as the quality of graphics in six service areas at each site.

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I. INTRODUCTION

In recent years many public libraries have completed long-range planning processes as suggested by the Public Library Association. In developing institutional mission statements, public libraries have chosen some of the association's eight basic service roles as priorities for serving the needs of their local communities. It would be expected that focusing on particular roles of service has affected ways in which libraries serve their publics. Arthur Curley, writing in Public Libraries and the Challenges of the Next Two Decades, states: "Surely a library's collection, access, and service policies should grow out of a sense of the library's institutional mission."[1]

As the number of information sources continues to increase, methods used by librarians as information specialists to guide users in productive searches become more crucial than in the past. The problem of information overload has become increasingly acute in modern society since Ortega y Gasset first discussed the need for librarians to act as information filters for patrons in 1939. In a 1982 Library Quarterly article, Lester Asheim extended this concept, writing:

> The function of the librarian, then, is not only to act as a filter, but also to make it possible for the users to act as their own filters. . . . Since overload can be an inhibiting factor in the search for information, control of the flow, not just of the nature of the content, is the librarian's responsibility.[2]

One aspect of guiding user searches is the use of informational graphics, including sign systems and displays. In past generations library patrons might have been accustomed to consulting a librarian to find needed materials, just as they would expect the clerk at their local general store to gather their list of groceries

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[1]Arthur Curley, "Barriers to Information Access within the Library," in Public Libraries and the Challenges of the Next Two Decades, ed. Alphonse Trezza (Littleton, CO: Libraries Unlimited, 1985), 165.

[2]Lester Asheim, "Ortega Revisited," Library Quarterly 52 (July 1982): 221-222.

and supplies for them. Since that time, shopping for commercial products has evolved into self-service, directed by clear and concise visual guidance systems and marketing displays. Searching for information in a public library, however, most often still requires consulting a librarian, unless patrons have been taught how to use the library's classification system. Andrew Yeaman, an environmental design consultant, has written that "the quality of libraries as information supermarkets remains poor for the information shoppers who still become lost today."[3]

Research concerning library user behavior has revealed that the majority of users today find materials by browsing the collection rather than by consulting a librarian. Yet these browsers are expected to find their way through numerical systems to a particular subject area for information, rather than by following clear, easy-to-understand signs. Gale Eaton, writing in Journal of Youth Services in Libraries, reports the results of one study of college students in which "75 to 85 percent of students in each class described their initial response to the library in terms of fear or anxiety."[4] Offering possible solutions for user anxiety in the face of information overload, Eaton suggests: "It might be done by environmental design and by the careful placement of concise signs, putting information where it will be most needed."[5]

The use of appropriate signs and displays has been shown in recent studies to enhance user access to library materials. Results of such studies indicate that libraries which value maximum access to information for their users will attempt to make effective use of informational graphics as visual guidance systems.

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[3]Andrew R.J. Yeaman, "Lost in the Information Supermarket," Wilson Library Bulletin 64 (December 1989): 42.

[4]Gale Eaton, "Lost in the Library: Are Spatial Skills Important in Shelf Searches?," Journal of Youth Services in Libraries (Fall 1991): 77.

[5]Ibid., 84.

Purpose of the Study

This study was undertaken to determine if public libraries are making effective use of visual guidance systems to carry out their stated missions. A checklist developed by the author (see Appendix C), based on established criteria for creating effective signs and displays in public buildings, was used to evaluate the use of informational graphics in a sampling of public libraries in Ohio. A list of design element criteria used for the checklist can be found in Appendix B of this paper. A copy of the checklist worksheet is included as Appendix D. Results of the checklist evaluation were compared to the mission statement of each library included in the study to determine if the quality of a library's use of informational graphics relates to the organization's chosen roles of service.

Definitions of Terms

For the purposes of this paper, the meanings of the terms listed below are understood to be as follows:

AESTHETICS: a subjective decision that signs and displays are visually pleasing

ALPHANUMERICS: the individual alphabetical and numerical symbols in a sign or display

CONSISTENCY: the uniform appearance of each type of sign

DESIGN ELEMENTS: the fundamental, essential features of the informational graphics

FLAG: to signal the location of a particular part of a library collection

FLUSH-MOUNT: a method of displaying a sign by attaching it flat against a surface

FONT: a set of type with a particular size and style

INFORMATIONAL GRAPHICS: signs and displays used to provide visual guidance for instruction, direction, identification, or orientation

LEGIBILITY: the degree of ease in reading a text

ORIENTATION: the act of becoming familiar with a location and position relative to a new environment

READABILITY: the comprehensibility of the content of the text

SANS-SERIF: any font type without the decorative lines which may finish off the main strokes of a letter of the alphabet

VISIBILITY: the distinguishability of the individual alphanumerics in a sign.

Limitations of the Study

This research was limited to the observation of library interiors, and excluded regulatory signs, which may vary according to local codes. The libraries' audio-visual areas were also excluded, as eight of the twelve observed facilities contained small collections. Financial and time constraints resulted in the target study group including only the twelve public library facilities of one county. In rating the observed signs and displays, each item listed on the checklist was given equal value, as the relative importance of the variables in design elements is not known. Thus, the resulting score for each library reflects the quality of its informational graphics only on a numerical continuum in relationship to the other libraries included in the study. Use of such a checklist might be helpful in any library setting, however, to evaluate whether the quality of the informational graphics in the facility is sufficient

to improve patron access to materials.

II. LITERATURE REVIEW

Prior to the development of a checklist for this study, a literature review was conducted using standard search sources, including Library Literature, Information Science Abstracts, ABI-Inform, ERIC, PSYCLIT, Library and Information Science Abstracts, Periodicals Abstracts, and Comprehensive Dissertation Index. Monographs and journal articles concerning basic service roles for public libraries, user search behaviors, the need to guide users in finding information, the effectiveness of displays and signs, standards for creating informational graphics, and the outlook for public library services in the future were consulted.

In its 1979 Public Library Mission Statement and Imperatives for Service, the Public Library Association acknowledged that individual libraries serve different roles in meeting the needs of their local communities. The association published eight basic service roles for public libraries and encouraged libraries to engage in long-range planning based on analysis of their local communities. Many public libraries have initiated this process, focusing on three or four particular service roles when articulating their mission statements. The eight basic service roles are listed as Appendix A in this paper. A concise overview of the Public Library Association project can be found in Carolyn A. Anthony's article, "The Public Library Development Program: Options and Opportunities," in Public Libraries (Summer 1987).

Much research has been completed in the last thirty years concerning the study of user behavior and search strategies. Philip M. Morse, in his 1970 article, "Search Theory and Browsing," wrote: "Browsing is prevalent in most libraries. In fact, it can be argued that browsing is one of the most frequent ways in which the library

user finds the books he borrows."[6] In 1986 Sharon Baker reviewed several studies of user browsing behavior and the effectiveness of library strategies for visual guidance. Baker concluded:

> These six studies show that, when properly designed to be readily accessible to patrons, book displays will significantly increase selection and use of the books they contain. Furthermore, three of the researchers confirmed that the primary users of the displayed titles were browsers. Goldhor (1981b) found that 68% of those choosing books which were located in a display area or listed on a book list said that they had been browsing. Aguilar (1982) noted that all but 1 of 17 persons who had borrowed a displayed title were simply browsing for a good book to read. And Baker (1985) found that browsers accounted for 83% of those using the displays in her study.[7]

A 1988 study by Chandra Prabha, Duane Rice, and John Bunge indicated that the majority of library users, 55.3%, browse through areas of a library collection rather than ask a librarian for help.[8]

Other studies reveal that the judicious placement of informational signs and displays is an effective guide for users in their search for library materials. Reporting on a 1970's study, Herbert Goldhor noted: "Adult patrons borrowed copies of 110 selected titles significantly more often when these books were in a prime display location than when they were in their regular places on the shelves."[9] Sarah Long conducted research in 1987 on the effect of face-front book display, concluding:

> Grocery shoppers, bookstore browsers, and library browsers appear to be displaying the same consumer behaviors and are equally

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[6]Philip M. Morse, "Search Theory and Browsing," Library Quarterly 40 (1970): 391.

[7]Sharon L. Baker, "Overload, Browsers, and Selections," Library and Information Science Research 8 (1986): 322-323.

[8]Chandra Prabha, Duane Rice, and John Bunge, "How Do You Browse?," Library Journal (January,1988): 61.

[9]Herbert Goldhor, "Experimental Effects on the Choice of Books Borrowed by Public Library Adult Patrons," Library Quarterly 51 (1981): 253.

> susceptible to attention-getting devices. . . . This method of display does have an effect on browsers by helping their brains wade through all the stimuli presented by gaining their attention, narrowing their choices, and causing them to select certain titles.[10]

John Kupersmith of the University of Pennsylvania underscores the need to guide library users by using high quality informational graphics. He writes:

> Whether the environment will be an aid or an obstacle to the user depends upon the extent to which the library acts to shape its environment as an instructional tool. . . . When the various parts of the system work together, users---even those with complex tasks to perform---can find their way in the library as they do in other signed environments, such as airports or hospitals, looking for and receiving an orderly series of cues.[11]

The literature suggests also that successful public libraries in future decades will be learning centers containing clear informational graphics. According to Linda Crismond they should include graphics in which "the terms used are not those of the librarian but of the customer: information, new books, check-out. . . . a true learning environment,a true community center."[12]

A review of the literature did not reveal published studies which have evaluated the quality of informational graphics in library settings, although several writers lament the current state of visual guidance in many libraries. As early as 1978, Wayne Kosterman, in a special report for Library Technology Reports, stated: "Environmental graphics tend to become an afterthought; under-budgeted, and done poorly, if at all."[13]

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[10]Sarah P. Long, "The Effect of Face-Front Book Display in a Public Library," North Carolina Libraries 45 (Fall 1987): 151-152.

[11]John Kupersmith, "Information Graphics and Sign Systems as Library Instruction Media," Drexel Library Quarterly 16 (1980): 54, 56.

[12]Linda Crismond, "The Future of Public Library Services," Library Journal (November 15, 1986): 48-49.

[13]Wayne Kosterman, "A guide to Library Environmental Graphics," Library Technology Reports 14 (May-June 1978): 270.

While established standards for creating effective sign systems and displays have been available for decades, these standards have apparently not previously been adapted to create a tool for evaluating existing informational graphics in public libraries. S. Anita Talar emphasizes the need for such evaluation:

> As information specialists and communications people, are we helping to ease library anxiety and information overload or are we promulgating it? . . . As communication and information experts, we should insist that our library's signs project clarity, information, and direction.[14]

Several Publications were consulted when developing criteria for the evaluation of informational graphics. Monographs and manuals include Aaron and Elaine Cohen's Designing and Space Planning for Libraries;[15] Library Displays by Everhart, Hartz, and Kreiger;[16] Library Display Ideas by Linda Campbell Franklin;[17] Alan Heath's Off the Wall: the Art of Book Display;[18] and A Sign System for Libraries by Mary Mallery and Ralph DeVore.[19] Furnishing Library Interiors by William Pierce,[20] Pollet and Haskell's Sign Systems for Libraries:

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[14]S. Anita Talar, "Library Signage: Decoration and Education," New Jersey Libraries 23 (Spring 1990): 17-18.

[15]Aaron Cohen and Elaine Cohen, Designing and Space Planning for Libraries (New York: R.R. Bowker Co., 1979), 1-241.

[16]Nancy Everhart, Claire Hartz, and William Kreiger, Library Displays (Metuchen, NJ: Scarecrow Press, 1989), 1-112.

[17]Linda Campbell Franklin, Library Display Ideas (Metuchen, NJ: Scarecrow Press, 1989), 1-230.

[18]Alan Heath, Off the Wall: the Art of Book Display (Littleton, CO: Libraries Unlimited, 1987), 1-153.

[19]Mary S. Mallery and Ralph E. DeVore, A Sign System for Libraries (Chicago: American Library Association, 1982), 1-33.

[20]William S. Pierce, Furnishing the Library Interior (New York: Marcel Dekker, Inc., 1980), 1-288.

Solving the Wayfinding Problem,[21] Signs and Guiding for Libraries by Linda Reynolds and Stephen Barrett,[22] and Library Displays Handbook by Mark Schaeffer[23] also were valuable resources. Journal articles offering practical advice for developing and evaluating an effective sign system are John Kupersmith's "Reducing Visual Clutter"[24] and "'Starter Kit' for a Sign System"[25] in Research Strategies, the Wilson Library Bulletin article "New Directions in Library Signage: You Can Get There from Here" by Dorothy Pollet,[26] and Andrew Yeaman's School Library Journal article "Vital Signs: Cures for Confusion."[27]

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[21]Dorothy Pollet and Peter C. Haskell, Sign Systems for Libraries: Solving the Wayfinding Problem (New York: R.R. Bowker, 1979), 1-271.

[22]Linda Reynolds and Stephen Barrett, Signs and Guiding for Libraries (London: Clive Bingley Limited, 1981), 1-158.

[23]Mark Schaeffer, Library Displays Handbook (New York: H.W. Wilson, 1991), 1-250.

[24]John Kupersmith, "Reducing Visual Clutter," Research Strategies (Spring 1988): 83-84.

[25]John Kupersmith, "'Starter Kit' for a Sign System," Research Strategies (Summer 1988): 133-135.

[26]Dorothy Pollet, "New Directions in Library Signage: You Can Get There from Here," Wilson Library Bulletin 50 (February 1976): 456-462.

[27]Andrew R.J. Yeaman, "Vital Signs: Cures for Confusion," School Library Journal (November 1989): 23-27.

III. METHODOLOGY

This study consisted of a physical survey of the twelve public library facilities in Lorain County, Ohio. Descriptive research of each library's use of informational graphics was completed in September of 1992, using a checklist developed by the author. Design elements used as criteria for this list were established from standards described in several sign system manuals and journal articles devoted to the effective use of signs and displays. Each guideline adopted was found in at least two sources in the literature search, and most were mentioned in several.

Design elements observed in the assessment of each sign or display include legibility, visibility, readability, consistency, and aesthetics. Specific aspects of each of these elements (listed in Appendix B) must have been present for an item to be evaluated as "appropriate" on the evaluation checklist. If certain elements were lacking in a particular sign or display, this was noted on the checklist sheet, as was the lack of informational graphics specified by the established criteria as appropriate.

Types of graphics studied were those used for orientation, direction, identification, and instruction in a public library setting. A numerical rating scale was developed to evaluate items on the checklist. For each item on the checklist, a library received a score of "0," "-1," or "-2." A score of "0" for an item indicated appropriate use of a particular type of sign or display. A score of "-1" indicated that the assessed item was present, but did not meet the established criteria. A score of "-2" was recorded if a required sign or display was not present. The total checklist score for each library was deducted from 100 to establish that library's raw score. The twelve library facilities were ranked in order from highest to lowest score to compare the quality of their informational graphics according to the rating scale. Their relative effectiveness in using sign systems and displays was then

compared with the libraries' selected roles of service, as stated in the libraries' respective mission statements.

Mission statements were received by verbal request at the time of library observations for ten of the facilities. The staff working at two libraries at the time of observation had no information about service priorities, so information for those facilities was obtained from the library directors by telephone request.

Data gathered were compared to discover if some libraries shared similar service priorities which were not mentioned in the mission statements of other libraries in the study. Results were also compared to determine if libraries with similar service priorities ranked numerically closer to each other than to other libraries in the study on the evaluation checklist. A pattern of such relationships among at least three of the libraries was to be accepted as an indication that the implementation of chosen service priorities had affected the quality of the information graphics in those libraries. The direction of any such relationship was also to be noted, to discover if the adoption of particular service priorities had resulted in higher or lower quality informational graphics in the observed libraries.

Data were compared also to observe the distribution of scores by type of informational graphics. Results of this evaluation might indicate which types of graphics are currently best utilized in public libraries and which types are in greatest need of improvement. The distribution of scores by major service areas in each library was also studied, to ascertain which areas might require priority attention in upgrading informational graphics.

Appendices to this paper include a list of the Public Library Association's eight basic service roles (Appendix A), a description of the criteria established for assessing design elements in informational graphics (Appendix B), the evaluation checklist developed for the study (Appendix C), and a copy of the checklist

worksheet developed for the study (Appendix D).

Tables included in the paper provide data concerning the distribution of checklist scores for the participating libraries by the type of informational graphics rated (Table 2) and by the total numerical value of each library's rating (Table 1). The ranking of libraries in the study by total numerical score is compared with the libraries' chosen service roles in Table 3.

IV. FINDINGS

Data were tabulated to determine the quality of informational graphics in the participating libraries according to the numerical rating scale used when observing each facility (see Table 1). Totals were derived for each type of sign or display evaluated and for the quality of informational graphics assessed in each major service area in the facilities (see Table 2).

Results indicate that the observed libraries have utilized appropriate informational graphics for some of the evaluated components of sign systems for public buildings. Eight of the twelve facilities displayed proper orientation and directional signs where needed. All twelve posted adequate notification of library hours of service. Individual rooms and offices were appropriately labeled in seventy-five percent of the buildings. The same percentage included clear and concise written point-of-use directions for major tools. Detailed instructions accompanied most computer catalogs.

Data concerning other types of informational graphics yielded mixed results. Three libraries (25%) displayed adequate graphics to distinguish specific areas of the building. Two libraries contained signs differentiating various parts of the children's collection and one did the same for its nonfiction area. Eight buildings (67%) had no signs indicating parts of any collection, whether for various genres of fiction, age or grade level, special collections, or specific media. Ten clearly identified service points for reference services and five did so for circulation activities. One library displayed a sign identifying its restrooms as accessible for persons with disabilities.

Nearly all facilities posted some stack end labels in their children's, adult fiction, and adult nonfiction collections. Subject signs were included with some classification numbers for nonfiction collections in two buildings. One displayed simplified

Table 1

Distribution of Checklist Scores

LIBRARY	TOTAL SCORE
1	89
2	86
3	85
4	84
5	83
6	82
7	79
8	78
9	77
10	74
11	72
12	71

Table 2

Distribution by Type of Informational Graphics

TYPE	APPROPRIATE f	%	INADEQUATE f	%	NOT PRESENT f	%
Orientation	8	67%	1	8%	3	25%
Directional	8	67%	1	8%	3	25%
Identification: Major Service Areas	3	25%	4	33%	5	42%
Identification: Rooms/Offices	9	75%	1	8%	2	17%
Identification: Facilities for Disabled	0	0%	1	8%	11	92%
Instructional: Library Operations	12	100%	0	0%	0	0%
Instructional: Point-of-Use Displays	9	75%	1	8%	2	17%
Instructional: Prime Location Exhibits	6	50%	5	42%	1	8%
Identification: Parts of Collection	CH 2 ADNF 1	17% 8%	2 3	17% 25%	8 8	67% 67%
Identification: Service Points	CIRC 5 REF 10	42% 83%	1 0	8% 0%	6 2	50% 17%
Identification: Stack End Labels	CH 2 ADF 1 ADNF 2 17%	17% 8%	9 11 10	75% 92% 83%	1 0 0	8% 0% 0%
Identification: Shelf Labels	CH 1 ADF 0 PER 12 ADNF 0	8% 0% 100% 0%	7 0 0 0	58% 0% 0% 0%	4 12 0 12	33% 100% 0% 100%
Instructional: Face-Front Displays	CH 9 ADF 6 PER 12 ADNF 5	75% 50% 100% 42%	2 5 0 5	17% 42% 0% 42%	1 1 0 2	8% 8% 0% 17%

subject signs with pictures in its children's nonfiction area. Shelf labels to flag heavily used sections of a collection or to indicate where a particular section begins were observed in seven children's services collections. One facility made extensive use of shelf labels in its children's area, both for fiction author and nonfiction subject location. No shelf labels were seen in the adult collections in any of the twelve libraries. Periodical collections were uniformly well labeled at all sites.

Exhibits and displays were also observed at each library. Eleven of the buildings contained at least one prime location display. Five of the eleven displayed one exhibit in a prime location. All five were new book displays. Temporary prime location displays featuring materials dealing with particular subjects or genres of local interest were observed in half of the buildings.

All participating facilities contained appropriate face-front displays for periodicals and all displayed some adult fiction in a face-front manner. Eleven utilized some children's face-front book displays. Ten had some books placed face-front in their nonfiction collections.

Service role priorities were included with the mission statements of all twelve libraries. Three of the Public Library Association's eight basic service roles were emphasized by the participating facilities in articulating mission statements. "Popular materials library" was chosen as a primary role by eleven libraries and as a secondary role by one facility. A primary role as "reference library" was chosen by eight of the institutions. One library listed this as a secondary role. The library as "formal education support center" was appointed a primary role by five libraries and a secondary role by five others. Being a "preschoolers' door to learning" was seen as a secondary role by all five libraries which included this role in their mission statements. Two libraries chose "independent learning center" as a primary role and one chose "community activities center." One facility picked "community information

center as a secondary role, while none included the role of "research center" as a priority. Two listed "outreach" as a primary service role. This option is not included as one of the Public Library Association's eight basic service roles.

The distribution of chosen service role priorities was compared with the libraries' total checklist scores ranked from lowest to highest for quality of informational graphics. As seen in Table 3, no relationship between service role priorities and quality of informational graphics was apparent in this study.

Table 3

Distribution of Basic Service Roles and Checklist Scores

LIBRARIES Checklist Scores BASIC SERVICE ROLES	1 89	2 86	3 85	4 84	5 83	6 82	7 79	8 78	9 77	10 74	11 72	12 71
1 Community Activities Center		P										
2 Community Information Center										S		
3 Formal Education Support Center	S	P	S	P	S	S	P	P			S	P
4 Independent Learning Center		P								P		
5 Popular Materials Library	P	P	P	P	P	S	P	P	P	P	P	P
6 Preschoolers Door to Learning	S		S		S			S			S	
7 Reference Library	P		P	P		P	P	S	P		P	P
8 Research Center												
Outreach		P				P						

P=Primary Role
S=Secondary Role

V. SUMMARY

Data evaluated for this study indicate that the twelve participating libraries utilize appropriate informational graphics for serving certain types of information needs. All twelve have posted hours of service for their facilities and eight have adequate orientation and directional signs where required. (Five of these eight are small facilities in which orientation and directional signs are not needed.) The presence of these types of signs, observed near the main entrances of buildings at all sites, suggests that patrons in many of the facilities will receive positive first impressions when entering the library looking for major service areas.

In 75% of the observed institutions, patrons will discover concise directions for using computer catalogs, an important aspect of increasing access to information. Dewey classification numbers listed on book stack ends in nearly all the facilities help guide the sophisticated library user to specific subject areas. Periodicals sections of the libraries also appear to be well identified.

The libraries in this study do not appear to successfully differentiate specific areas in their buildings. Nine contain no graphics to identify the various rooms or separate sections of their facilities. Ten display no identification for the different parts of their children's collections, eleven (92%) have none for their nonfiction collections, and eight display no identification for parts of collections anywhere in their buildings. Ten display identification for reference services, but less than half do so for their circulation areas. These results focus on the need for more complete sign systems to guide users to separate areas of library collections.

Included in successful sign systems for wayfinding are stack end labels and shelf labels to guide the user to more specific locations for materials. While most of the observed facilities display Dewey classification numbers for their nonfiction collections, only two also post subject labels for heavily used topics. Of the seven

buildings displaying stack end and shelf labels in their children's collections, six utilize them only for alphabetical identification. None of the libraries use shelf labels in their adult collections. If public libraries are to facilitate independent access to materials for patrons, attention must be given to helping narrow their searches by the judicious placement of identification labels to flag particular locations.

Research concerning prime location exhibits and face-front displays has emphasized their importance in narrowing materials searches for browsers. While eleven of the libraries in this study contain at least one prime location display, nearly half exhibit only a general assemblage of new books. Libraries such as these can better serve their publics by developing plans for creative temporary displays on timely subjects.

Of special note is the finding that only one sign designating facilities for persons with disabilities was seen in any library during the observation period. Public library administrations are perhaps especially sensitive to the needs of the disabled following passage of the 1992 Americans with Disabilities Act. Libraries need to immediately remedy any lack of relevant signs as buildings are adapted to the needs of those with disabilities.

Information tabulated on basic service roles chosen by the twelve participating libraries reveals that each of the twelve sees the role as "popular materials library" as a priority. The roles of "reference library" and "formal education support center" are also listed prominently, both by libraries with excellent informational graphics and by those where use of graphics is minimal. The lack of relationship between chosen roles and the use of informational graphics to aid in the fulfillment of those roles indicates that in some public libraries abstract goals are not being translated into practical application of policy. It is possible that the formal mission

statements are not actually accepted as important by library staff or that the use of effective informational graphics is not seen as necessary to carry out the stated goals. High quality graphics, which are often expensive to produce, might be considered a low-priority luxury rather than an essential means for guiding library users to information and materials.

Recommendations for Future Research

Additional research might be undertaken to discover reasons for the minimal use of informational graphics in some libraries. Of further interest would be research concerning the relative quality of various types of signs and labels in a library setting, evaluating their actual effect on the success of information searches. Study of user response to informational graphics or the absence of graphics in the public library could provide valuable data for library administrators in deciding whether to invest in providing this type of assistance to patrons. Information specialists need to explore all aspects of enhancing user access to materials and information, including the use of an important tool for which professional librarians often lack expertise: informational graphics.

VI. APPENDICES

APPENDIX A

BASIC LIBRARY SERVICE ROLES

1. COMMUNITY ACTIVITIES CENTER: The library is a central focus point for community activities, meetings, and services.

2. COMMUNITY INFORMATION CENTER: The library is a clearinghouse for current information on community organizations, issues, and services.

3. FORMAL EDUCATION SUPPORT CENTER: The library assists students of all ages in meeting educational objectives established during their formal courses of study.

4. INDEPENDENT LEARNING CENTER: The library supports individuals of all ages pursuing a sustained program of learning on an independent basis.

5. POPULAR MATERIALS LIBRARY: The library features current, high-demand, high-interest materials in a variety of formats for persons of all ages.

6. PRESCHOOLERS DOOR TO LEARNING: The library encourages young children to develop an interest in reading and learning through services for children and for parents and children together.

7. REFERENCE LIBRARY: The library actively provides timely, accurate, and useful information for community residents.

8. RESEARCH CENTER: The library assists scholars and researchers to conduct in-depth studies, investigate specific areas of knowledge, and create new knowledge.[28]

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[28] American Library Association, Public Libraries Division, Coordinating Committee on Revision of Public Library Standards, The Public Library Mission Statement and Imperatives for Service (Chicago: American Library Association, 1979).

APPENDIX B

INFORMATIONAL GRAPHICS: DESIGN ELEMENTS CRITERIA

INFORMATIONAL GRAPHICS: signs and displays used to provide visual guidance for instruction, direction, identification, or orientation in a library facility.

Appropriate informational graphics will meet the following criteria for design elements in effective sign systems and displays:

LEGIBILITY: the degree of ease in reading a text. Major variables include letter size, line length, and inter-line spacing.

1. For greatest legibility, a sans-serif font such as Helvetica will be used, allowing at least one inch of letter height for every 20 feet of viewing distance.
2. Inter-line spacing will generally be at two thirds the height of upper case letters. With the use of only upper case letters, spacing might be one half the letter height.
3. Use of less legible fonts may be appropriate when aesthetic considerations outweigh information needs.

VISIBILITY: the distinguishability of the individual alphanumerics in a sign.

1. While the use of all upper case letters can be appropriate for short labels read from a distance, mixed upper case and lower case letters allow for greater image quality of running text.
2. Maximum contrast for greater visibility is achieved using black letters on a white or yellow background with a glare-free surface.
3. Other color combinations can be used, if there is marked contrast in brightness. Use of colors without such contrast, such as red and green, will result in signs which are difficult for a person with color blindness to read.
4. Visibility will also be affected by the level of lighting and the viewing angle of users, including children and patrons in wheelchairs.
5. Inclusion of tactile signs in Braille, especially for rest rooms and elevators, where it may be difficult to ask for assistance, will allow blind users more independent use of the facilities.

READABILITY: the comprehensibility of the content of the text.

1. Information which will direct user behavior productively will be stated in the most concise manner possible.
2. Words will be chosen which are easily understood by the general public.
3. The use of pictorial symbols or icons will often add clarity.

CONSISTENCY: the uniform appearance of each type of sign.

1. All signs with similar information will usually be located at the same viewing level.
2. Recommended heights for mounting signs include:
   a. flush-mounted signs for adult areas, 5'6" from floor to top of sign.
   b. flush-mounted signs for children's area, 5'3" from floor to top of sign.
   c. flush-mounted signs for young children's area, 4'3" from floor to top of sign.
   d. ceiling-hung and wall projection signs, 7'0" from floor to bottom of sign.
3. All signs and displays will be clearly visible and visually compatible with each other and building architecture.
4. Beginning at the building entrance, signs will convey increasingly more specific information as they visually lead the user to the services or materials needed.

AESTHETICS: A subjective decision that signs and displays are visually pleasing.

1. The visual impact of sign systems and displays will have an overall positive effect on the user.
2. Whenever possible, signs will have more width than height and be rectangular in shape.
3. All signs and displays will be clean and in good repair.

APPENDIX C

CHECKLIST FOR PUBLIC LIBRARY INFORMATIONAL GRAPHICS

TYPES OF SIGNS AND DISPLAYS INCLUDED ON CHECKLIST:

I. ORIENTATION: Signs needed for building which contains major service areas not visible from main entrance. These areas might include Reference Services, Adult Nonfiction, Adult Fiction, Audio-visual, Periodicals, Young Adult Services, Children's Services, and Circulation.

1. Appropriate directory or directional sign(s) near main entrance, indicating general locations for the service areas

2. Sign(s) present, but do(es) not meet criteria

3. No sign(s) where needed to give location of service area(s)

II. DIRECTION: Signs needed at decision points to aid users in making correct wayfinding decisions.

1. Appropriate sign(s) for wayfinding

2. Some sign(s) present, but do(es) not meet criteria

3. No sign(s) where needed for wayfinding

III. IDENTIFICATION: Signs needed to distinguish specific destination points.

MAJOR SERVICE AREAS: Signs should be larger than those which identify specific areas of collections.

1. Appropriate signs for major service areas

2. Some signs present, but do not meet criteria

3. Signs not present for major service areas

ROOMS AND OFFICES: Signs should be smaller than those for major service areas.

1. Appropriate signs for individual rooms and offices

2. Some signs present, but do not meet criteria

3. Signs not present where needed

FACILITIES FOR THE DISABLED: Signs should include universal symbol for handicapped access.

1. Appropriate sign(s) for facilities for disabled users

2. Sign(s) present, but do(es) not meet criteria

3. Sign(s) not present where needed

SPECIFIC SERVICE AREAS: EACH OF THE FOLLOWING CATEGORIES SHOULD BE CHECKED IN MAJOR SERVICE AREAS OF THE LIBRARY.

PARTS OF COLLECTION: Signs should be smaller than those for major service areas, but larger than stack end labels. These signs might identify genre or age level areas, special collections, or specific media.

1. Appropriate signs for parts of collection

2. Some signs present, but do not meet criteria

3. Signs not present where needed

SERVICE POINTS: Signs should be smaller than those for major service areas, but larger than stack end labels. These signs identify locations for procedures, such as "check out" and "ask here."

1. Appropriate signs for service points

2. Some signs present, but do not meet criteria

3. Signs not present where needed

STACK END LABELS: Signs should be smaller than those for parts of collections and service points. They may be flush mounted or project from stacks, and should include information about specific subjects or authors included in the bookstack.

1. Appropriate stack end labels

2. Some stack end labels present, but do not meet criteria

3. Stack end labels not present

IDENTIFICATION LABELS: These should be the smallest signs in a service area. They may be flush mounted to shelf edges or project from stacks, and should be used to "flag" heavily used sections of a collection or to identify where a section begins (such as "B Authors").

1. Appropriate identification labels

2. Some identification labels present, but do not meet criteria

3. Identification labels not present

IV. INSTRUCTION: Signs needed to explain procedures and to inform about events, programs, and resources.

GENERAL: Sign(s) near entrance should include library service hours and any information concerning changes in library operation.

1. Appropriate signs posting library service hours and other needed information concerning general library operations

2. Some signs present, but do not meet criteria

3. Signs not present where needed

SPECIFIC SERVICE AREAS: EACH OF THE FOLLOWING CATEGORIES SHOULD BE CHECKED IN MAJOR SERVICE AREAS OF THE LIBRARY.

POINT-OF-USE DISPLAYS: Signs explaining use of major tools, such as card or computer catalog or indexes.

1. Appropriate point-of-use displays at major tools

2. Some point-of-use displays, but do not meet criteria

3. Point-of-use displays not present

PRIME LOCATION EXHIBITS: These temporary displays highlight library resources and/or services and are located near entrance to building or major service area. They should be compatible with other signs and displays and have visual impact to attract attention.

1. Appropriate prime location exhibit(s)

2. Some prime location exhibits, but do not meet criteria

3. Prime location exhibits not present

FACE-FRONT DISPLAYS: Materials set on shelving so that front of item is visible to user. These may be displayed on aisle-end racks, in free-standing display racks, on table tops, or on open book shelving. Displays should be neat, uncluttered, and well-stocked.

1. Appropriate face-front display of materials

2. Some face-front displays, but do not meet criteria

3. Face-front displays not present

APPENDIX D

CHECKLIST FOR PUBLIC LIBRARY INFORMATIONAL GRAPHICS

LIBRARY_____DATE_____

SERVICE ROLE PRIORITIES AS LISTED IN MISSION STATEMENT_____
_____
_____
_____

1. ORIENTATION GRAPHICS:
____ 0 Appropriate
____-1 Present, but does not meet criteria
____-2 Not present where needed
Comments:

2. DIRECTIONAL GRAPHICS:
____ 0 Appropriate
____-1 Present, but does not meet criteria
____-2 Not present where needed
Comments:

3. IDENTIFICATION GRAPHICS---MAJOR SERVICE AREAS:
____ 0 Appropriate
____-1 Present, but does not meet criteria
____-2 Not present where needed
Comments:

4. IDENTIFICATION GRAPHICS---ROOMS AND OFFICES:
____ 0 Appropriate
____-1 Present, but does not meet criteria
____-2 Not present where needed
Comments:

5. IDENTIFICATION GRAPHICS---FACILITIES FOR THE DISABLED:
____ 0 Appropriate
____-1 Present, but does not meet criteria
____-2 Not present where needed
Comments:

6. INSTRUCTIONAL GRAPHICS---LIBRARY OPERATIONS:

____ 0 Appropriate
____-1 Present, but does not meet criteria
____-2 Not present where needed
Comments:

7. INSTRUCTIONAL GRAPHICS---POINT-OF-USE DISPLAY:

____ 0 Appropriate
____-1 Present, but does not meet criteria
____-2 Not present where needed
Comments:

8. INSTRUCTIONAL GRAPHICS---PRIME LOCATION EXHIBITS:

____ 0 Appropriate
____-1 Present, but does not meet criteria
____-2 Not present where needed
Comments:

CHECK EACH OF THE FOLLOWING CRITERIA SEPARATELY
FOR THE SPECIFIED MAJOR SERVICE AREA(S):

Major service areas included in this study are:

Circulation Services (CIRC)
Children's Services (CH)
Adult Fiction (ADF)
Reference Services (REF)
Periodicals (PER)
Adult Nonfiction (ADNF)

9. IDENTIFICATION GRAPHICS---PARTS OF COLLECTION:

____CH ____ADNF
0 Appropriate
-1 Present, but does not meet criteria
-2 Not present where needed
Comments:

10. IDENTIFICATION GRAPHICS---SERVICE POINTS:

____CIRC ____REF
0 Appropriate
-1 Present, but does not meet criteria
-2 Not present where needed
Comments:

11. IDENTIFICATION GRAPHICS---STACK END LABELS:

____CH ____ADF ____ADNF
 0 Appropriate
-1 Present, but does not meet criteria
-2 Not present where needed
   Comments:

12. IDENTIFICATION GRAPHICS---SHELF LABELS:

____CH ____ADF ____PER ____ADNF
 0 Appropriate
-1 Present, but does not meet criteria
-2 Not present where needed
   Comments:

13. INSTRUCTIONAL GRAPHICS---FACE-FRONT DISPLAYS:

____CH ____ADF ____PER ____ADNF
 0 Appropriate
-1 Present, but does not meet criteria
-2 Not Present where needed
   Comments:

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